

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1 (Currently Amended): A process for producing a crude oil having lowered unsaponifiable matter content and/or ester-type sterol content and ~~comprising~~ a highly unsaturated fatty acid as a constituent fatty acid, ~~characterized in that~~ comprising obtaining a microorganism capable of producing a fat or oil comprising an unsaturated fatty acid as a constituent fatty acid and culturing the microorganism ~~is cultured~~ in a medium containing a nitrogen source concentration of 2 to 15% within a culture tank equipped with an agitation impeller satisfying the requirement that the ratio of the diameter of agitation impeller (=d) to the inner diameter of the culture tank (=D) is $d/D=0.30$ to 0.6.

Claim 2 (Original): The process according to claim 1, wherein the ratio of the diameter of agitation impeller (=d) to the inner diameter of the culture tank (=D) is $d/D=0.34$ to 0.6.

Claim 3 (Previously Presented): The process according to claim 1, wherein the nitrogen source contains a nitrogen source which has been sterilized at a pH of not more than 5.

Claim 4 (Currently Amended): ~~[[A]]~~ The process ~~[[of]]~~ according to claim 1 further comprising a step of refining the crude.

Claim 5 (Currently Amended): ~~The process for producing a crude oil comprising a highly unsaturated fatty acid having lowered unsaponifiable matter content and/or ester-type sterol content as a constituent fatty acid~~ according to claim 1, ~~characterized in that~~ wherein not less than 70% of the fat or oil comprising said highly unsaturated fatty acid as the constituent fatty acid is accounted for by a triglyceride.

Claim 6 (Previously Presented): The process according to claim 1, wherein the highly unsaturated fatty acid constituting the fat or oil is γ -linolenic acid (18:3 ω 6), dihomogamma-linolenic acid (20:3 ω 6), arachidonic acid (20:4 ω 6), 7,10,13,16-docosatetraenoic acid (22:4 ω 6), 4,7,10,13,16-docosapentaenoic acid (22:5 ω 6), α -linolenic acid (18:3 ω 3), 6,9,12,15-octadecatetraenoic acid (18:4 ω 3), 8,11,14,17-eicosatetraenoic acid (20:4 ω 3), eicosapentaenoic acid (20:5 ω 3), 7,10,13,16,19-docosapentaenoic acid (22:5 ω 3), 4,7,10,13,16,19-docosahexaenoic acid (22:6 ω 3), 6,9-octadecadienoic acid (18:2 ω 9), 8,11-eicosadienoic acid (20:2 ω 9), or 5,8,11-eicosatrienoic acid (Mead acid: 20:3 ω 9) or a combination of two or more of them.

Claim 7 (Previously Presented): The process according to claim 1, wherein the microorganism is one belonging to the genus *Mortierella*, *Conidiobolus*, *Pythium*, *Phytophthora*, *Penicillium*, *Cladosporium*, *Mucor*, *Fusarium*, *Aspergillus*, *Rhodotorula*, *Entomophthora*, *Echinosporangium*, or *Saprolegnia*.

Claim 8 (Previously Presented): The process according to claim 1, wherein said microorganism is one belonging to the genus *Mortierella*, subgenus *Mortierella*.

Claim 9 (Original): The process according to claim 8, wherein the microorganism belonging to the subgenus *Mortierella* is the species *alpina* belonging to the genus *Mortierella*.

Claims 10-17. (Canceled).

Claim 18. (Currently Amended) A general food and drink, a functional food, a nutrition supplement, a formula for premature babies, a formula for mature babies, a food for infants, a food for expectant and nursing mothers, or a food for aged persons, comprising the crude oil and/or the refined fat or oil according to claim 27 [[16]].

Claim 19 (Currently Amended): A therapeutic nutrition food comprising the crude oil of claim 27 ~~[[16]]~~ and/or the refined fat or oil obtained by refining the crude oil.

Claim 20 (Currently Amended): A food for animals or fishes, comprising the crude oil of claim 27 ~~[[16]]~~ and/or the refined fat or oil obtained by refining the crude oil.

Claim 21 (Currently Amended): A pharmaceutical composition, comprising the crude oil of claim 27 ~~[[16]]~~ and/or the refined fat or oil obtained by refining the crude oil.

Claim 22 (Currently Amended): A pharmaceutical composition prepared by using the crude oil of claim 27 ~~[[16]]~~ and/or the refined fat or oil obtained by refining the crude oil.

Claim 23 (Currently Amended): The process ~~for producing a refined fat or oil~~ according to claim 4, ~~characterized in that~~ wherein not less than 70% of the fat or oil comprising said highly unsaturated fatty acid as the constituent fatty acid is accounted for by a triglyceride.

Claim 24 (Previously Presented): The therapeutic nutrition food according to claim 19, further comprising a neutral carrier suitable for oral, intrarectal or parenteral administration.

Claims 25-26. (Canceled).

Claim 27 (Currently Amended): A crude oil comprising a fat or oil having lowered unsaponifiable matter content and/or ester-type sterol content comprising, as a constituent fatty acid, a highly unsaturated fatty acid, ~~characterized in that~~ wherein the ester-type sterol content of the fat or oil is ~~not more than~~ 0.8% by weight or less; ~~[[and]]~~ said highly unsaturated fatty acid content is ~~not less than~~ 30% by weight or more; and the content of triglyceride is 90% by weight or more based on the total fatty acid in the fat or oil.

Claim 28 (Currently Amended): A refined ~~fat or oil produced by refining the crude oil~~

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according to claim 27 comprising a fat or oil having lowered unsaponifiable matter content and/or ester-type sterol content comprising, as a constituent fatty acid, a highly unsaturated fatty acid, wherein the ester-type sterol content of the fat or oil is 0.8% by weight or less; said highly unsaturated fatty acid content is 30% by weight or more; and the content of triglyceride is 90% by weight or more based on the total fatty acid in the fat or oil.

Claim 29 (New): The crude oil according to claim 27, wherein the content of triglyceride is 94% by weight or more.

Claim 30 (New): The crude oil according to claim 28, wherein the content of triglyceride is 94% by weight or more.